PULGACORE

EXTERNAL PARASITE TREATMENT

TOPICAL SOLUTION

Health Registration No.: 3B1-2-10019-AGROCALIDAD

Formula:

Each 100 ml contains:

Fipronil	10.0 g
S-metoprene	9.0 g
Excipients q.s.	100.0 ml

SPECIES AND DOSAGE:



SPECIES	BODY WEIGHT	DOSAGE
0.7 mL PIPETTE		
Canines	For small dogs weighing from 2kg to 10 kg	1 pipette
Felines	For cats weighing up to 3 kg	1/2 pipette
Felines	For cats weighing more than 3 kg	1 pipette
1.5 mL PIPETTE		
Canines	For medium-sized dogs weighing 11kg to 20 kg	1 pipette
3 mL PIPETTE		
Canines	For large dogs weighing 21kg to 40 kg	1 pipette

DOSAGE AND ADMINISTRATION
Route of Administration: Topical

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INDICATIONS:

PULGACORE is used to control and treat infestations of lice, fleas, and ticks. It acts upon contact with the animal's skin oils and hair follicles, forming a film that spreads evenly over the skin. It prevents future infestations due to its adulticidal and larvicidal effects on fleas.

PULGACORE can be used on puppies 10 weeks of age or older. The pet may be bathed 2 days after application. PULGACORE must be applied to animals that have not been bathed. Prevent the pet from licking the product.

ROUTE OF ADMINISTRATION: Topical

PHARMACOKINETICS:

FIPRONIL: In all species studied experimentally, with the exception of goats, the most important metabolite identified was provisionally named RM 1602 (sulfonated derivative), which demonstrated excellent activity against fleas and ticks at concentrations of 50 and 500 ppm. Quantitatively and under experimental conditions, mice and cats showed the greatest capacity to metabolize fipronil. The oxidation of a sulfoxide moiety to form a sulfone is a common metabolic pathway for many xenobiotics. All these reactions are catalyzed by cytochrome P-450 or by flavin-containing microoxygenases. The differences observed among the various animal species are closely related to their respective enzyme ratios. A significant variation (of the order of a decimal place) in the plasma concentrations of fipronil and RM 1602 has been observed in dogs following topical administration. This may be explained by differences in enzymatic activity among different dog breeds.

The main characteristic of this compound is the excellent distribution of the molecule throughout the coat, starting from the focal application site and extending to the upper neck, both flanks, and the lumbar region (beginning on the 2nd day of treatment). This rapid spread through the coat of treated dogs could be explained by mechanical dissemination (scratching) and by the lipophilic nature of fipronil, which allows it to diffuse through the skin's sebum. Its long-lasting effect may also result from the concentration that occurs in the sebaceous glands, which act as reservoirs. The minimum effective concentration (MEC) in the coat for the control of Ctenocephalides species in dogs has been established at 0.7 µg/g.

METOPRENE: Metoprene is rapidly metabolized in mammals to acetates. Some of the parent compound is excreted in the feces of both the host and the flea, often in amounts sufficient to produce sustained effects on insect development. Metoprene is considered to have low toxicity in mammals, with an acute oral LD50 in dogs of more than 5,000 mg/kg. It degrades rapidly in aqueous environments and is unstable in the presence of ultraviolet light; therefore, it is not suitable for use in exposed situations.

MECHANISM OF ACTION:

FIPRONIL: It acts as a GABA antagonist by binding to the receptor inside the chloride ion channel. Normally, chloride flow is regulated by the GABA receptor, which allows the channel to open, causing hyperpolarization of the nerve cell with the resulting decrease in its activity. Blockade of the chloride channel nullifies the neuromodulatory effect of GABA, inhibiting the intracellular flow of that ion, which leads to the death of the parasite due to hyperexcitation.

Recent research suggests that the mechanism of action of fipronil is complex and involves multiple interactions

of both the parent compound fipronil and its oxidation product, fipronil sulfone, with GABA- and glutamate dependent chloride channels in the nervous system of insects. Both fipronil and fipronil sulfone inhibit GABA receptors, as well as desensitizing and non-desensitizing glutamate-activated chloride channels, although the activity of fipronil sulfone is much greater than that of fipronil in desensitizing GluCls. The net result of insect exposure to fipronil is the blockade of inhibitory nerve transmission, resulting in hyperexcitability and death of susceptible pests. GluCls have been observed only in invertebrates.

METOPRENE: Metoprene interferes with the metamorphosis and development of susceptible insects, resulting in ovicidal, embryocidal, and larvicidal activity. These effects are produced by direct exposure of eggs to metoprene or by exposure of adult female fleas that lay eggs.

Metoprene is a synthetic analog of the juvenile hormone ecdysone. This hormone promotes stage transition by inhibiting the insect growth regulatory system (IGRS) through the blocking of protein synthesis (vitellogenic synthesis), following its accumulation in body fat and hemolymph. Thus, arthropods are prevented from reaching the adult stage, stalling their larval development and causing death.

PRECAUTIONS- WARNINGS-CONTRAINDICATIONS:

- Apply only to animals that have not been bathed.
- Prevent your pet from licking the product.
- Wear gloves when applying the product.
- Do not smoke or eat during application.
- Avoid contact with skin and eyes.
- In case of accidental contact, rinse thoroughly with water.
- In case of poisoning, show the label to a doctor.
- Toxic product; use with caution.

Keep out of reach of children and pets.

DRUG INTERACTIONS

None have been reported.

ADVERSE REACTIONS

Mild irritation at the application site may occasionally occur.

COMMERCIAL PRESENTATIONS

0.7-ml Pipette
1.5-ml Pipette,
3-ml Pipette